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ABSTRACT

The effect of the variables of student sex, teacher sex, grade level, and student achievement on teacher sex role expectations was assessed. Two hundred responses from 71 classroom teachers (grades 1-12) on the Teacher Sex Role Perception Inventory (TSRP) were analyzed. The TSRP is an adaption of the Bem Sex Role Inventory. Data analysis led to three conclusions: (1) stereotypical feminine traits were not perceived in high achieving students: (2) male and female achievers rated highest on masculinity and femininity scales: and (3) there are possible implications for teachers' perceptions of female student achievement. Feminine sex role was not perceived as predominant in the high achieving students. Results support Bem's idea that androgynous individuals reflect a positive model of school achievement. This negative relationship between the feminine sex role and high achievement is presented as evidence for declining female achievement over grade level. Some of the conclusions were reconfirmed by university students who were also administered the TSRP. (Author/GK)

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SEX ROLE EXPECTATIONS OF CLASSROOM TEACHERS, GRADES 1 - 12

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SEX ROLE EXPECTATIONS OF CLASSROOM TEACHERS, GRADES 1-12

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ABSTRACT

The effect of the variables of student sex, teacher sex, grade level, and student achievement on teacher sex role expectations was assessed. Two hundred responses from seventy-one classroom teachers on the Teacher Sex Role Perception inventory (an adaptation of the Bem Sex Role Inventory) were analyzed. Of the four variables considered, student achievement alone was a highly significant predictor. Teachers classified high achieving students as androgynous and masculine. Low achieving students were classified as feminine and undifferentiated. This negative relationship between the feminine sex role and high achievement may be a factor in declining female achievement over grade level.

Female achievement seems to decline the longer girls are in school while boys' achievement seems to increase over grade level, potentially limiting important life choices of many girls. One factor which may influence student achievement is teacher expectation. Although the expectation effect (self-fulfilling prophecy effect) lacks consistent empirical support in its effect on student achievement, a "naturally" based expectancy (such as student sex might evoke) has greater support as a stimulus on teacher expectancy than do artificially induced expectations. In addition, while school itself has been

characterized by sex role research as a feminine environment, recent evidence suggests that the androgynous sex role might be the most mentally healthy model. Thus, this study attempted to determine to what extent the characteristics of teachers' sex role expectations fit the sex roles of androgyny, femininity, masculinity, or an undifferentiated role.

METHOD

The Problem

The problems in this study were (a) to determine whether teachers in grades 1 through 12 stereotyped high achieving and low achieving students by sex, (b) to determine whether teachers' sex role perceptions for female and male students differed by grade level, (c) to determine whether teachers' sex role perceptions for female and male students differed by achievement, and (d) to determine the effect of teacher sex on their sex role perceptions of students.

Sample

The teachers surveyed in this study were employed in classrooms of grades one through 12 in the schools under the jurisdiction of the Stark County Ohio Board of Education. The Stark County Board of Education serves 12

suburban and rural districts not served by the cities.

Instrumentation

The Bem Sex Role Inventory was altered for this study. The Bem Sex Role Inventory (Bem, 1974) was developed by Sandra L. Bem in an attempt to examine sex roles in a way contrary to the traditional sex role scales. Sex role scales have historically been based on the notion that qualities that make up masculinity and femininity are opposites on a continuum, e.g., males are aggressive, females are not aggressive. The Bem Sex Role Inventory (BSRI) contains a masculinity scale and a femininity scale, which are independent, 20 personality characteristics for each. These characteristics were selected as masculine or feminine if they were judged more socially desirable for a man or woman, respectively, in American society. Because all items for each sex are socially desirable, another 20 items, neutral regarding sex, were added in the development of the scale ("friendly," "conceited," "inefficient," e.g.). These were added to insure that respondents were not merely endorsing socially desirable traits. The 20 masculine items, 20 feminine items, and 20 neutral items are listed in Table 1.

The previous traditional sex role inventories, bipolar continuums, reflect the notion that a person must be either masculine or feminine but not both. Bem characterizes masculinity and femininity as independent dimensions. She

Table 1

Items on the Masculinity, Femininity, and Social Desirability Scales of the BSRI

Masculine items	Feminine items	Neutral items
49. Acts as a leader	11. Affectionate	51. Adaptable
46. Aggressive	5. Cheerful	36. Conceited
58. Ambitious	50. Childlike	9. Conscientious
22. Analytical	2. Compassionate	60. Conventional
13. Assertive	53. Does not use harsh language	45. Friendly
10. Athletic	35. Eager to soothe hurt feelings	15. Happy
55. Competitive	20. Feminine	3. Helpful
4. Defends own beliefs	14. Flatterable	48. Inefficient
37. Dominant	59. Gentle	24. Jealous
19. Forceful	47. Gullible	39. Likeable
25. Has leadership abilities	56. Loves children	6. Moody
7. Independent	17. Loyal	21. Reliable
52. Individualistic	26. Sensitive to the needs of others	30. Secretive
31. Makes decisions easily	8. Shy	33. Sincere
40. Masculine	38. Soft spoken	42. Solemn
1. Self-reliant	23. Sympathetic	57. Tactful
34. Self-sufficient	44. Tender	12. Theatrical
16. Strong personality	29. Understanding	27. Truthful
43. Willing to take a stand	41. Warm	18. Unpredictable
28. Willing to take risks	2. Yielding	54. Unsystematic

SOURCE: S. L. Bem. The measurement of psychological androgyny. Journal of Consulting and Clinical Psychology, 1974, 42, 156.

developed this inventory based on the research that shows that people who are highly sex typed may be limited in behavioral options. Therefore, the scale measures androgyny as well, i.e., one who has not internalized society's sex-typed standards of behavior for men or women.

Development of the altered BSRI, the Teacher Sex Role Perception inventory

The BSRI was altered for the current study in the following ways. The original instructions directed the respondent to "Describe yourself." The scores, then, reflected a self-rating. Because the investigators in the current study were examining how teachers perceived students, the respondent was directed to rate a hypothetical student from a brief written description of the student. This adaptation was similar to one used by Powell and Butterfield (1977). They directed subjects (business management students) to "Describe a good manager" as they completed the BSRI.

The Teacher Sex Role Perception inventory (TSRP) consists of six forms (Appendix A) which were referred to as "student stimulus persons." Each of the six stimuli was preceded by a student description. Student descriptions vary on the forms as follows:

1. female
2. male
3. female high achiever

4. female low achiever
5. male high achiever
6. male low achiever

Rather than a self-rating, the TSRP resulted in scores reflecting the sex role perceptions that teachers have of six different student stimulus persons. Whether a particular student was placed in the masculine, feminine, androgynous, or undifferentiated category by a teacher reflected the extent to which that teacher stereotyped by sex. It was a basic tenet of this investigation that those perceptions teachers have of students are translated into expectations for those students.

A pilot study using the responses from 24 graduate education students at the University of Akron was conducted to obtain reliability estimates on the TSRP. A total of 60 forms was included. The following Cronbach's Alpha Reliability coefficients were obtained: for the masculinity subscale α = .96; for the femininity subscale α = .88; and for the total scale α =. 95.

Data Collection and Analysis

A total of 154 teachers were selected using a table of random numbers. The random sample was divided proportionally by grade level and equally by sex in grades three through twelve. Only female teachers were subjects in grades one and two due to no male teachers being employed at

those levels.

Each of the 154 teachers was asked to complete a random sequential assortment of three forms of the TSRP for a total N of 462. Random sequential ordering may ameliorate multiple-treatment interference, a threat to external validity, "likely to occur whenever multiple treatments are applied to the same respondents, because the effects of prior treatments are not usually erasable." (Campbell & Stanley, 1963, p. 6)

Because the research design was one of repeated measures, person vectors must be included. Some of the variance in the criterion could be accounted for the subject's effect. A method suggested by Newman, Benz, and Williams (1979) to deal with data that may be simultaneously independent and dependent (since 2 sets of scores in a comparison may be repeated for some subjects and not repeated for others) was used in this study.

A significance level of .05 was set by the investigators; however, because analyzing the data involved multiple comparisons, the level of probability deemed necessary had to be adjusted. A correction method suggested by Newman and Fry (1972)* was used in this study. The corrected alpha became .008.

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* $\alpha' = \frac{\alpha}{N-1}$

RESULTS

Return rate

Of the 154 teachers, 83 returned the rating scales for a return rate of 53.2%. Of those returned, 200 responses from 70 teachers were usable for data analysis. Table 2 reports the number of usable responses compared with those distributed and reveals the proportions by grade level and sex.

Masculinity scores

A masculinity score on the TSRP is the mean rating (from 1 "low" to 7 "high") of the 20 stereotypical masculine behaviors and personality traits listed in Table 1. The mean rating of all the students on masculinity was 4.413 (SD = .977, median = 4.255). The ratings on masculinity varied over the six student stimulus persons. Table 3 summarizes these differences and will be referred to in this discussion. Teacher sex was not a significant predictor of masculinity ratings ($p = .483$). Among the low achievers, student sex was not significantly related to masculinity ($p = .102$). However, sex was significant among high achievers with males rated significantly higher ($p = .002$).

Student sex (whether a student stimulus was male or female) was generally not a significant predictor of masculinity.

Table 2

Number of Student Stimulus Person Forms of TSRP Returned by Grade Level Group and Sex Compared to Those Distributed

Grade Level	Sex	Distributed		Returned and Used		Returned Not Used	
		Teachers	Forms	Teachers	Forms	Teachers	Forms
1-3	Male	7	21	6			
	Female	21	63	5			
		28	84	11	33		
4-6	Male	21	63	7			
	Female	21	63	12			
		42	126	19	56		
7-9	Male	21	63	12		2	6
	Female	21	63	7		2	2
		42	126	19	52	4	12
10-12	Male	21	63	8		4	12
	Female	21	63	13			
		42	126	21	59	4	12
						4[a]	12
TOTAL		154	462	70	200	12	36

[a]Moved

Table 3

Summary Table of One F Test and Eight t Tests: Results from Models Tested, R^2 Values, F Ratios, and Significance Levels, for Testing Differences Between Predictor Variables on the Criterion "Masculinity" Score

Hypothesis Number and (Predictor Variables)	R^2_f	R^2_r	df	F	p	S/NS[a]	N
F test							
1 (six student stimulus persons)	.67293	.18648	5/121	35.9921	.00009	S	200
t tests							
3 (male versus female teacher)	.00746	.00494	1/195	.4935	.48297	NS	200
5 (male versus female student)	.61592	.56379	1/35	4.7504	.0361	NS	60
7 (high achieving versus low achieving in female students)	.72978	.26489	1/49	84.3015	.0009	S	67
9 (high achieving versus low achieving in male students)	.78179	.07711	1/50	161.4702	.00009	S	73
11 (males versus females in high achieving)	.38464	.21093	1/55	15.5262	.00023	S	81
13 (males versus females in low achieving)	.28006	.23269	1/42	2.7999	.10169	NS	59
15 (high achieving versus low achieving)	.72662	.11778	1/123	273.933	.00009	S	140
17 (both achieving level males versus both achieving level females)	.14998	.11778	1/125	4.7343	.03145	NS	140

Note. All models were tested covarying grade level, sex of the teacher, and person vectors. Complete regression tables are found in Appendix

[a]S/NS = significant or nonsignificant

Comparing ratings of male and female students showed no significant difference between them on masculinity ratings (p = .036). Secondly, responses to high achievement and low achievement females were combined. When tested for differences in their relationship to masculinity scores, no significant difference was found (p = .032).

While student sex did not appear to be related significantly to masculinity ratings of teachers, achievement did. Significant F ratios resulted when high achievement and low achievement student stimuli were rated on masculinity. (p=.00009)

A look at the partial regression weights (Table 4) for these hypotheses reveal that the teachers rated the high achieving student stimulus higher on masculinity than the low achieving student stimulus. This pattern held true when high achievers were compared to low achievers regardless of sex (Hypothesis 15) when only females were considered (Hypothesis 7) and when only males were considered (Hypothesis 9).

Femininity Scores

A femininity score on the TSRP is a mean rating from 1 "low" to 7 "high" on the 20 stereotypical feminine behaviors and personality traits listed on Table 1.

The mean femininity score for all student stimulus persons was 4.274 (SD = .693, median = 4.197). Table 5

Table 4

Partial Regression Weights on High Achieving Student Stimulus Persons and Low Achieving Student Stimulus Persons on Masculinity Score Criterion

Hypothesis	Student Stimulus	Regression Weights
15		
	High achievers	1.625
	Low achievers	0.0
7		
	High achieving females	1.422
	Low achieving females	0.0
9		
	High achieving males	1.7705
	Low achieving males	0.0

summarizes the findings of the six student stimulus persons' femininity ratings. When just considering the responses to male stimulus persons, teachers rated the high achievers and the low achievers significantly differently on femininity ($p = .008$). For females, achievement differences did not relate significantly to femininity ($p = .078$). Achievement was also a significant predictor when considered alone ($p = .001$). Considering the partial regression weights for the predictors of achievement (Table 6) reveals that for the two significant findings (Hypotheses 10 and 16) high achieving stimulus persons are rated higher on femininity scales.

Slope Differences of Masculinity and Femininity Ratings Over Grade Level

One of the predictions suggested early in this study was that teachers' sex role expectations vary by grade level. The instrumentation in this study was designed so that the six student stimulus persons were presented as students at each respondent's grade level. The data, then, reflect sex role classifications of each student stimulus person over grade levels one through twelve. In general, the slopes of masculinity ratings and femininity ratings did not vary significantly as grade level increased. The trends of scores for all six student stimulus persons appear in Appendix B. For female students both masculinity and femininity ratings tended to increase over

Table 5

Summary Table of One F Test and Eight t Tests: Results from Models Tested, R^2 Values, F Ratios, and Significance Levels, for Testing Differences Between Predictor Variables on the Criterion "Femininity" Score

Hypothesis Number and (Predictor Variables)	R^2_f	R^2_r	df	F	p	S/NS[a]	N
F test							
2 (six stimulus persons)	.37792	.29607	5/121	3.184	.0097	NS	200
t tests							
4 (male versus female teacher)	.0393	.0233	1/195	3.2575	.07259	NS	200
6 (male versus female student)	.4537	.4162	1/35	2.4033	.13006	NS	60
8 (high achieving versus low achieving in females)	.37756	.33656	1/49	3.2277	.07856	NS	67
10 (high achieving versus low achieving in males)	.39368	.30145	1/50	7.6056	.00810	S	73
12 (males versus females in high achieving)	.46824	.43651	1/55	3.2825	.07548	NS	81
14 (males versus females in low achieving)	.22070	.11310	1/42	5.7989	.02050	NS	59
16 (high achieving versus low achieving)	.33500	.27754	1/123	10.6274	.00144	S	140
18 (both achieving level males versus both achieving level females)	.3300	.2775	1/125	9.7977	.00218	S	140

Note. All models were tested covarying grade level, sex of the teacher, and person vectors. Complete regression tables are found in Appendix

[a]S/NS = significant or nonsignificant

Table 6

Partial Regression Weights for Achievement Stimuli on the Criterion of Femininity

Hypothesis	Student Stimulus	Regression Weight
10		
	High achievement males (X_{12})	0.4075
	Low achievement males (X_{13})	0.0
16		
	High achievement females (X_{18})	0.3122
	Low achievement females (X_{19})	0.0

grade level. For male students, masculinity ratings tended to increase and femininity tended to decrease over grade level. For the high achieving female stimulus, femininity ratings were apt to increase and masculinity to decrease over grade level. The low achieving female stimulus produced a declining trend in both ratings as grade level increased. These trends held true for low achieving males as well. For the high achieving male, however, results in masculinity ratings increased with grade level while femininity ratings tended to decrease. These trends were slight and resulted in no significance, as shown in Table 7.

Sex Role Classifications of Teacher Ratings

The largest proportion of females (39.4%) were classified as feminine sex types while the greatest proportion of males (44.4%) were classified as undifferentiated. High achieving females were classified overwhelmingly with the androgynous sex type (64.4%) while high achieving males are almost equally apt to evoke androgynous (47.6%) and masculine (53.8%) sex role expectations. The largest proportion of low achieving females were classified as feminine (57.1%) and the low achieving male stimulus was overwhelmingly undifferentiated (74.2%). (See Table 8).

Table 7

Trends, Direction of Slope, and Significance Levels in Masculinity and Femininity Ratings of Six Student Stimuli Over Grade Level

Student Stimulus	Masculinity		Femininity	
	Direction	p	Direction	p
Female	+	.6546	+	.9856
Male	+	.9818	-	.9776
High achieving female	-	.8550	+	.9443
Low achieving female	-	.7393	-	.8744
High achieving male	+	.9965	-	.3003
Low achieving male	-	.72100	-	.4604

Table 8

Sex Role Classifications of Six Student Stimuli (N = 200)

Student Stimulus Persons	Androgynous		Masculine		Feminine		Undiff.		
	N	%	N	%	N	%	N	%	Total
Female	9	27.3	2	6.1	13	39.4	9	27.3	N = 33 (100%)
Male	7	25.9	5	18.5	3	11.1	12	44.4	N = 27 (100%)
High achieving female	25	64.1	9	23.1	2	[illegible]1	3	7.7	N = 39 (100%)
Low achieving female	0	0.0	1	3.6	16	57.1	11	39.3	N = 28 (100%)
High achieving male	20	47.6	21	53.8	0	0.0	1	2.4	N = 42 (100%)
Low achieving male	0	0.0	1	3.2	7	22.6	23	74.2	N = 31 (100%)
TOTAL	61		29		41		59		N = 200

Androgynous Sex Role Expectation

Bem (1974) classifies those persons whose mean self-rating masculinity and femininity scores both fall above the median for the group being tested as "androgynous." Therefore, those student stimulus persons that teache s rate above the median on both masculinity ratings (4.255) and femininity ratings (4.197) will reflect that teacher's sex role expectation of "androgyny."

A highly significant finding ($p = .0009$) resulted when the six student stimulus persons were compared on the criterion of androgyny. To determine whether or not sex of the student was a significant predictor in determining androgynous sex role expectations, the results for male student stimulus persons (both high and low achievement) were tested against the results for female students (both high and low achievers.). The results ($F = .72$, $p = .39$) indicate that sex was not a significant factor in predicting teachers' androgynous sex role expectations. Testing the difference between student stimulus one (female) and student stimulus two (male) revealed little relationship to the androgynous sex type classification ($p = .82$).

To further test the effect of student sex on androgynous expectations, only high achieving student stimulus conditions were examined. The relationship between student

sex and androgyny in high achievers was tested with non-significant (p = .31) results, suggesting once again that whether a student is male or female was not significantly predictive of teachers' classifying them as androgynous. Examination of the partial regression weights indicated that high achieving females may be somewhat more likely to evoke androgynous expectations than high achieving males.

Sex differences related to androgyny among low achievers could not be tested because no low achieving student stimulus persons were classified as androgynous.

A hypothesis was tested to determine the relationship between achievement and teachers' sex role classification of androgyny. The resulting F value was highly significant (p = .00009). This suggests that achievement was related to androgynous sex role expectations. Investigation of the partial regression weights indicated that high achievers were more likely to be classified as androgynous than low achievers.

Two hypotheses investigated the relationship between achievement and androgynous expectations for females and males separately.

For both females and males the hypotheses were supported. Achievement seems to be significantly related to androgyny for both sexes (p = .00009 for females, .00002 for males). The partial regression weights suggest

that for both males and females the high achieving student stimulus was more likely to be classified as androgynous by classroom teachers.

Masculine Sex Role Expectation

Those student stimulus persons whose masculinity and femininity subscale rating scores matched Bem's criteria (Bem, 1974) for "masculine" sex type were so classified. A person was masculine if the masculinity rating was above the masculinity median score for the group (4.255) and the femininity score was below the femininity median score for the group (4.197).

To determine whether or not the six stimulus persons differed significantly in being classified as masculine by teachers, an F test was done resulting in significant findings ($p = .00009$), supporting the hypothesis of differences among the stimuli.

To determine the effect of student sex on the masculine classification, a t test was done between females and males (student stimulus persons one and two). A second test for sex differences when responses to both high and low achieving females were compared to both high and low achieving males was done. Neither resulted in significant findings ($p = .13$ in the first case, $p = .07$ for the latter).

Two further hypotheses tested for sex differences. One considered the relationship between only high achieving

males and high achieving females to see if sex was a significant predictor of the masculine classification. A second considered sex differences among low achievers. Both hypotheses were not supported. The probability level with regard to the high achievers ($p = .08$) differs substantially from the level for low achievers ($p = .89$) being clearly closer to significance.

All hypotheses having to do with sex differences were not supported, suggesting that whether a student is male or female is not significantly related to a teacher's sex role expectation of masculine, as described by the Bem items.

Whether or not achievement in students is related to their being classified by teachers as masculine was tested by the following three hypotheses. A t test between responses to high achieving students and low achieving students was done. The hypothesis was supported and the difference found to be highly significant ($p = .00009$). Examining the regression weights suggests that high achievers were more likely to be classified as masculine that were low achievers.

When only female student stimuli were considered, a t test between high and low achievers was done, the difference on masculine sex expectations was not significant ($p = .10$). The partial regression weights indicate that the high achieving female student may be more likely classified as masculine.

On the other hand, a test of the relationship between high and low achieving student stimuli when only males were considered resulted in significant findings ($p = .0001$). High achieving males were significantly more likely to be classified as masculine sex types by classroom teachers.

Feminine Sex Role Expectation

Those student stimulus persons who were rated by subjects above the median for femininity scores (4.197) and whose masculinity ratings were rated below the median masculinity score (4.255) were classified as feminine sex role types.

One hypothesis tested the differences between all six student stimuli as they predicted feminine classification. The hypothesis was supported in that differences among the six were significant ($p = .00009$).

Whether a student being male or female significantly predicted a feminine sex role expectation was tested. The results were not significant ($p = .04$) but approach significance levels. Regression weights indicated that females may be slightly more apt to be classified as feminine sex types as described by Bem.

Both high and low achieving female student stimuli were combined and tested against high and low achieving male student stimuli in predicting feminine classification,

another test of student sex difference. The results were significant ($p = .008$) and examining the partial regression weights suggests that females were more closely related to the feminine sex role type.

Further tests of sex differences in predicting feminine sex role expectations were carried out first between high achieving male student stimuli and high achieving female student stimuli. The results show the F ratio to be nonsignificant ($p = .35$), indicating no significant sex difference among high achievers.

Sex difference was considered among low achievers. This test yielded a nonsignificant F value ($p = .01$) suggesting that sex differences do not exist in teachers' sex role expectations of low achievers. The partial regression weights suggest that low achieving female student stimulus may be more likely to be classified as feminine.

Achievement as it related to feminine sex role expectations was tested by the following set of hypotheses. First of all, whether there is a significant difference between high achieving and low achieving students in predicting feminine sex role type was tested. The difference is highly significant ($p = .00009$). The partial regression weights here suggest that high achievement is negatively related to teachers' feminine sex role expectations.

Achievement within each sex was considered by the

final two hypotheses. One test considered achievement as a predictor of feminine sex role expectations in females and a second test considered this among males.

The significant F value (p=.00009) indicated significant differences in teachers' sex role expectations of female student stimuli persons of high and low achievement. A further look at the regression models and the partial regression weights suggests that the high achieving student stimulus was negatively related to the "feminine" sex role expectations of classroom teachers when only females were considered. Teachers were more likely to classify low achieving females as feminine sex types.

The second test showed significant differences as well (p= .004) suggesting again that among males, too, high achievement is negatively related to feminine sex role expectations. In other words, the data suggest that the feminine sex role expectation is related to low achievement among males.

Undifferentiated Sex Role Expectation

Bem (1974) classifies those persons who score below the median for their group on both masculinity and femininity subscales as undifferentiated sex role type. In this study those ratings of student siimulus persons below 4.255 on masculinity items and 4.197 on femininity items will be classified as reflecting undifferentiated sex role expectations. Undifferentiated implies a set of expectations that are void of sex role. While androgynous implies high

numbers of both masculine and feminine stereotypical traits, undifferentiated suggests a low number of both.

The investigators tested to see if significant differences existed among the six students in predicting undifferentiated sex role expectations. The F ratio was significant,(p=.00009) indicating that differences do exist.

To determine what effect student sex has on the undifferentiated sex type, a test was done. The F ratio was not significant, (p=30) indicating that student sex is not a significant predictor of the criterion.

Sex difference in relation to the criterion "undifferentiated" was tested further. When both achievement level males were combined and compared to both achievement level females, the data showed no significant differences (p=.15).

When only high achieving student stimuli were considered, sex differences were tested. The F ratio indicates that once again sex was not a significant predictor of the undifferentiated sex role classification. (p=.40)

A further hypotheses tested for sex differences among low achievers, the nonsignificant F (p=.01) indicates that student sex was not a significant predictor of undifferentiated expectations among low achievers. The regression weights suggest that low achieving males might be more likely to be categorized as undifferentiated and females might be negatively related to this criterion.

The next three hypotheses test for the relationship between achievement and the undifferentiated sex role type. The first tested for significant differences between high achieving student stimuli and low achieving student stimuli. The results indicate that the hypothesis was supported and was highly significant (p=.00009). High achievement was negatively related to undifferentiated sex role expectations, and teachers were more likely to classify low achievers as undifferented.

The next two hypotheses considered achievement among males and females separately. Both of the hypotheses were supported at probability levels less than alpha (p=.00009) for males; p=.009 for females). The regression weights again support that high achievement was negatively related to undifferentiated sex role expectations.

Summary of Data Analysis

Two hundred rating scales from seventy teachers were analyzed and the following results were revealed. The six student stimulus persons differed significantly on masculinity, but not femininity. As far as sex role classifications are concerned, high achieving males and females evoked androgynous expectations while the low achievers produced feminine expectations (low achieving female) and undifferentiated (low achieving male) expectations. Student sex, teacher sex, and grade level were consistently unrelated to sex role expectations, while achievement was significantly predictive.

Corroborating Evidence:

TSRP Results on College Students

Some additional data seem to support these findings. Because the study examined student ratings from 70 classroom teachers (a relatively low return rate of 53%) out of a possible 154 sampled, additional data were gathered from educators-in-training for use as a potential comparative file.

Seventy-nine undergraduate students in a course in Human Development and Learning (Spring Semester, 1979) were administered the TSRP, for a total ratings completed of 224. The majority of the subjects were female and education majors, and 69% of them planned to become teachers. Each of these subjects received a random sequenced selection of three student stimulus persons to rate. A relatively proportional number of responses for the six stimuli was achieved.

Additionally, 40 graduate students were administered the TSRP. These students were evening students in the College of Education at The University of Akron, enrollees in either Techniques of Research, Principles of Educational Administration, or Elementary School Administration during the Spring Semester, 1979. One hundred twelve responses were received from the 40 students. Most were teachers, although the fact that they were enrolled in administration courses indicates a possible interest or aspiration in this area. The subjects in this group were nearly evenly divided by sex, 18 males and 22 females. Their responses to the six student stimulus persons were proportionally

divided as well. The mean scores on masculinity and femininity ratings of graduates and undergraduates were similar to the teacher group in that masculinity means are consistently higher than femininity means. Table 9 reports these similarities as well as the median scores for all student ratings.

When masculinity and femininity ratings are examined for each of the six student stimuli, the graduate students and the undergraduate students produced similar results to those from classroom teachers, again supporting the original findings. Table 10 reports those similar sex role expectations. Several supporting pieces of data were found.

Table 9

Masculinity and Femininity Means and Medians for Teachers, Graduate Students, and Undergraduate Students

	Teachers	Graduates	Undergraduates
MASCULINITY			
Mean	4.413	4.194	4.324
Median	4.255	4.175	4.355
FEMININITY			
Mean	4.274	4.124	4.140
Median	4.197	4.095	4.200

Table 10

Comparative Means Among Classroom Teachers, Graduate Students, and Undergraduate Students on Masculinity and Femininity Ratings on the Six Student Stimulus Persons on the Teacher Sex Role Perception Inventory

Student Stimulus	Teachers (N=70)		Graduates (N=40)		Undergraduates (N=79)	
	$\bar{X}$ Femininity[a]	$\bar{X}$ Masculinity[a]	$\bar{X}$ Femininity	$\bar{X}$ Masculinity	$\bar{X}$ Femininity	$\bar{X}$ Masculinity
Female	2.2672 (2)[b]	2.0287 (4)	4.3110 (2)	3.8687 (4)	4.6146 (1)	3.9935 (4)
Male	1.9503 (5)	2.4312 (3)	3.9232 (5)	4.247 (3)	4.0180 (4)	4.7488 (3)
Female high achiever	2.3069 (1)	2.8540 (2)	4.4513 (1)	4.7379 (2)	4.5622 (2)	4.8571 (2)
Female low achiever	2.0876 (4)	1.4588 (6)	4.1926 (3)	3.4500 (6)	3.9565 (5)	3.3967 (6)
Male high achiever	2.0942 (3)	3.3450 (1)	4.1785 (4)	5.083 (1)	4.0458 (3)	5.1718 (1)
Male low achiever	1.7016 (6)	1.6090 (5)	3.7357 (6)	3.6145 (5)	3.6218 (6)	3.8582 (5)

[a]Classroom teacher mean scores are adjusted for grade level and teacher sex; others are not.

[b]Rank (1 to 6) of the student stimulus as compared with five other stimuli on this scale.

First of all, when masculinity ratings are compared from student to student, i.e., when one examines the results to discover which student stimulus wss rated highest on masculinity, the results for the teachers as well as the graduate students and undergraduates indicate that the high achieving male was rated the highest on masculinity. In fact, the ratings for all student stimulus conditions on masculinity are identical from group to group. In other words, the classroom teachers, as well as the graduates and undergraduates tend to agree on the rank order of masculinity ratings. Each group rated the high achieving female student as next highest on masculinity, the male as third, and so on with the female low achiever rated lowest on masculinity. These comparative groups, then, lend support to the findings from the subjects of the initial study, the classroom teachers.

When examining femininity ratings, an inconsistent pattern emerges. The teachers and the graduate students have similar rank order results while the undergraduates deviate only slightly. The female and the female high achiever were rated the highest in femininity ratings among the three groups. All groups rated the male low achiever as the lowest rank on femininity.

The results for the ratings of graduate students and undergraduate students differed. Table 11 summarizes the findings of differences among the six student stimulus persons on the four criterion sex role calssifications. When testing the hypotheses

Table 11

Regression Weights for Six Student Stimulus Persons for F-Test Results When p<.05 on Four Sex Role Classifications as Criterions for Graduate Students and Undergraduate Students

Student Stimulus	Sex Role Classification							
	Androgynous		Masculine		Feminine		Undifferentiated	
	Graduate p=.0187	Undergraduate p=.1704	Graduate p=.0427	Undergraduate p=.2159	Graduate p=.0343	Undergraduate p=.0090	Graduate p=.0090	Undergraduate p=.0054
Female	.0667	*	-.0840	*	-.0348	.0000	.0712	.0000
Male	.0670		.2202		-.2510	.2808	-.0008	-.3432
Female high achiever	.2937		.2834		-.3382	-.1136	-.1921	.0123
Female low achiever	-.1235		-.0664		.0719	.0254	.1655	-.1484
Male high achiever	.3892		.2328		-.3752	.0650	-.2007	-.2595
Male low achiever	-.0888		-.0873		-.1564	-.0781	.3791	-.0325

*p > .05 nonsignificant differences among student stimuli

of significant differences among the six student stimuli and covarying person vectors, these results were produced.

Graduate students classified the six student stimuli significantly differently on each sex role criterion, $p = .0187$ on androgyny, $p = .0427$ on masculine sex role, $p = .0343$ on feminine sex role; and $p = .0090$ on undifferentiated sex role. The male and female high achievers were more likely to be classified as androgynous or masculine. This result closely correlates to the classifications of teachers' sex role expectations.

The undergraduate students classified the student stimuli significantly differently on two criterions: feminine sex role and undifferentiated sex role. Undergraduate sex role classifications of the six students did not differ significantly for the androgynous and masculine sex role as criterions. The comparative regression weights for graduates and undergraduates on the feminine and undifferentiated sex role criterions are not similar; the patterns differ widely.

Discussion

The purpose of this study was to determine how teachers perceived the sex roles of students who varied by sex and achievement. Data analysis leads to three general conclusions. First of all, traits that are the stereotypical feminine ones were not those perceived in the high achieving students. And, secondly, the male and female high achievers were rated highest on both masculinity and femininity scales. And, thirdly, there may be implications for teachers' perceptions of achievement in female students.

Assuming that educators want to encourage an achievement oriented set of expectations in their classrooms, one must consider the findings of this study in light of previous studies that have characterized school as feminine. In this study the characteristically feminine sex role was not perceived as the predominant one in the high achieving students. High achievers were seen as having both a high rating on feminine qualities as well as high ratings on masculine qualities, i.e., androgynous. These results support Bem's notion that androgynous individuals reflect a positive model, at least as far as school achievement is concerned.

Not only was the feminine sex role not positively related to achievement; it was, in fact, negatively correlated. Teachers, then, may expect the achiever not to be congruent with the feminine sex role. And, because the sex role expectations did not vary significantly over grade level or between male and female teachers, the pervasiveness of the steroetypes is supported.

The conclusion of this study that to fit the feminine role is not to achieve sheds important light on evidence cited earlier that achievement declines the longer females are in school. Not surprisingly, the evidence implies, females may be fulfilling society's expectations for them. If teachers expect girls to be feminine and boys to be masculine, the results clearly show what playing the roles can mean in terms of academic behavior.

An important concern raised by the results of this study is the confounding effects of sex role and achievement. The antecedents of a child's sex role identity development are clearly social, according to any one of a number of theorists (Kohlberg, 1966; Freud, 1977; Johnson, 1963) founded in early social interaction. Achievement (defined as academic success or failure in this study) is not generally considered role behavior, but, on the other hand, is a construct more psychological than sociological. Because the sex role inventory clearly differentiated between high achievers and low achievers but not between males and females presents not only implications for educators but a dilemma for future researchers.

First of all, perhaps being a high achiever, getting high grades and test scores reflects a social role in the public schools. One must consider that intelligence; parental education, interest and support; and socioeconomic factors influence academic success. Further, academic success in the elementary and secondary school serves as preparation and prelude to adult success in the wider society. One important parameter defining success in our culture, in fact, is education, along with affluence, status, prestige, and decision-making power. With this in mind, and considering that this successful adult just described has almost always been male, it is not surprising that a successful achiever role is defined as a masculine sex role. The preference of teachers for convenience, dependence, and docility in the

classroom may contribute feminine qualities to this masculine ideal of success and results in the androgynous role as the role for school success. Educators, then, must consider that as sex roles change in the society the predetermined notion of who will be successful in the wider adult society also must change for female students to ever aspire to upper level careers and decision-making options.

Some recent criticism of the BSRI and the concept of androgyny as Bem describes it are relevant here as well. First al all, Pedhazur and Tetenbaum (1979) question Bem's procedures in scale development as she based the items on desirability ratings and used them as self-ratings. They state:

> ...it seems plausible to speculate that the dimensions that underlie trait ratings differ when the task is to rate oneself and when it is to rate the desirability of the traits for an abstract referent. (p. 1012)

Because the TSRP uses desirability ratings it would seem that the items have even more validity than they do on the BSRI, if one accepts this assumption.

Secondly, factor analyses of the BSRI have called into question the constructs being measured. In the present context use of the TSRP aims to measure the extent to which teachers sort students into categories by sex role. This follows closely with theoretical assumptions of "gender schema" put forth by Bem in a recent discussion when she characterized the BSRI as more a measure of sex typing than of androgyny. She further clarified the BSRI as not measuring personality or disposition but the extent to which an individual spontaneously sorts reality into culturally

masculine and feminine linked prescriptions. This she referred to as a cognitive mind-set, a "gender schema." (Bem, 1979) The results of this study using the BSRI as rating another instead of oneself is supported by these claims of Bem. The BSRI, it seems, is a valid tool when used as it was in this study, and future use in educational as well as other settings is indicated.

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APPENDIX A

TEACHER SEX ROLE

PERCEPTION INVENTORY

Date_____

Grade that you teach_____

Male_____ Female_____

On the following pages you will be shown the descriptions of three students. Please try to imagine that they are actually students who will be entering your class. Then mark the characteristics on each page that would indicate what you expect that student will be like. This may be a difficult task, because your information is very limited. There are no right or wrong answers--just your perceptions from the information given are what is important. Even though you may feel the information is inadequate, please go ahead and complete the ratings.

It will probably take about 15 minutes to complete the form. Remember, the higher your rating (from 1 to 7) the more you are endorsing that quality in the student.

EXAMPLE: shy

1 = Mark a 1 if you would expect the student NEVER OR ALMOST NEVER to be shy.

2 = Mark a 2 if you would expect the student USUALLY NOT to be shy.

3 = Mark a 3 if you would expect the student SOMETIMES BUT INFREQUENTLY to be shy.

4 = Mark a 4 if you would expect the student OCCASIONALLY to be shy.

5 = Mark a 5 if you would expect the student is OFTEN shy.

6 = Mark a 6 if you would expect the student is USUALLY shy.

7 = Mark a 7 if you would expect the student ALWAYS OR ALMOST ALWAYS is shy.

Mary Williams will enroll in your class next week.

1	2	3	4	5	6	7
NEVER OR ALMOST NEVER TRUE	USUALLY NOT TRUE	SOMETIMES BUT INFREQUENTLY TRUE	OCCASIONALLY TRUE	OFTEN TRUE	USUALLY TRUE	ALWAYS OR ALMOST ALWAYS TRUE

Self-reliant	
Yielding	
Helpful	
Defends own belief	
Cheerful	
Moody	
Independent	
Shy	
Conscientious	
Athletic	
Affectionate	
Theatrical	
Assertive	
Flatterable	
Happy	
Strong personality	
Loyal	
Unpredictable	
Forceful	
Feminine	

Reliable	
Analytical	
Sympathetic	
Jealous	
Has leadership abilities	
Sensitive to the needs of others	
Truthful	
Willing to take risks	
Understanding	
Secretive	
Makes decisions easily	
Compassionate	
Sincere	
Self-sufficient	
Eager to soothe hurt feelings	
Conceited	
Dominant	
Soft-spoken	
Likable	
Masculine	

Warm	
Solemn	
Willing to take a stand	
Tender	
Friendly	
Aggressive	
Gullible	
Inefficient	
Acts as a leader	
Childlike	
Adaptable	
Individualistic	
Does not use harsh language	
Unsystematic	
Competitive	
Loves children	
Tactful	
Ambitious	
Gentle	
Conventional	

FORM 1

James White will enroll in your class next week.

1	2	3	4	5	6	7
NEVER OR ALMOST NEVER TRUE	USUALLY NOT TRUE	SOMETIMES BUT INFREQUENTLY TRUE	OCCASIONALLY TRUE	OFTEN TRUE	USUALLY TRUE	ALWAYS OR ALMOST ALWAYS TRUE

Self-reliant	
Yielding	
Helpful	
Defends own belief	
Cheerful	
Moody	
Independent	
Shy	
Conscientious	
Athletic	
Affectionate	
Theatrical	
Assertive	
Flatterable	
Happy	
Strong personality	
Loyal	
Unpredictable	
Forceful	
Feminine	

Reliable	
Analytical	
Sympathetic	
Jealous	
Has leadership abilities	
Sensitive to the needs of others	
Truthful	
Willing to take risks	
Understanding	
Secretive	
Makes decisions easily	
Compassionate	
Sincere	
Self-sufficient	
Eager to soothe hurt feelings	
Conceited	
Dominant	
Soft-spoken	
Likable	
Masculine	

Warm	
Solemn	
Willing to take a stand	
Tender	
Friendly	
Aggressive	
Gullible	
Inefficient	
Acts as a leader	
Childlike	
Adaptable	
Individualistic	
Does not use harsh language	
Unsystematic	
Competitive	
Loves children	
Tactful	
Ambitious	
Gentle	
Conventional	

FORM 2

Janet Smith will enroll in your class next week. Her records indicate that she has generally received A's in academic subjects. Her standardized achievement scores fall above the 90th percentile.

1	2	3	4	5	6	7
NEVER OR ALMOST NEVER TRUE	USUALLY NOT TRUE	SOMETIMES BUT INFREQUENTLY TRUE	OCCASIONALLY TRUE	OFTEN TRUE	USUALLY TRUE	ALWAYS OR ALMOST ALWAYS TRUE

Self-reliant	
Yielding	
Helpful	
Defends own belief	
Cheerful	
Moody	
Independent	
Shy	
Conscientious	
Athletic	
Affectionate	
Theatrical	
Assertive	
Flatterable	
Happy	
Strong personality	
Loyal	
Unpredictable	
Forceful	
Feminine	

Reliable	
Analytical	
Sympathetic	
Jealous	
Has leadership abilities	
Sensitive to the needs of others	
Truthful	
Willing to take risks	
Understanding	
Secretive	
Makes decisions easily	
Compassionate	
Sincere	
Self-sufficient	
Eager to soothe hurt feelings	
Conceited	
Dominant	
Soft-spoken	
Likable	
Masculine	

Warm	
Solemn	
Willing to take a stand	
Tender	
Friendly	
Aggressive	
Gullible	
Inefficient	
Acts as a leader	
Childlike	
Adaptable	
Individualistic	
Does not use harsh language	
Unsystematic	
Competitive	
Loves children	
Tactful	
Ambitious	
Gentle	
Conventional	

FORM 3

Susan Fuller will enroll in your class next week. Her records indicate that she has generally received C's and D's in academic subjects. Her standardized achievement scores fall below the 50th percentile.

1	2	3	4	5	6	7
NEVER OR ALMOST NEVER TRUE	USUALLY NOT TRUE	SOMETIMES BUT INFREQUENTLY TRUE	OCCASIONALLY TRUE	OFTEN TRUE	USUALLY TRUE	ALWAYS OR ALMOST ALWAYS TRUE

Self-reliant	
Yielding	
Helpful	
Defends own belief	
Cheerful	
Moody	
Independent	
Shy	
Conscientious	
Athletic	
Affectionate	
Theatrical	
Assertive	
Flatterable	
Happy	
Strong personality	
Loyal	
Unpredictable	
Forceful	
Feminine	

Reliable	
Analytical	
Sympathetic	
Jealous	
Has leadership abilities	
Sensitive to the needs of others	
Truthful	
Willing to take risks	
Understanding	
Secretive	
Makes decisions easily	
Compassionate	
Sincere	
Self-sufficient	
Eager to soothe hurt feelings	
Conceited	
Dominant	
Soft-spoken	
Likable	
Masculine	

Warm	
Solemn	
Willing to take a stand	
Tender	
Friendly	
Aggressive	
Gullible	
Inefficient	
Acts as a leader	
Childlike	
Adaptable	
Individualistic	
Does not use harsh language	
Unsystematic	
Competitive	
Loves children	
Tactful	
Ambitious	
Gentle	
Conventional	

FORM 4

John Baker will enroll in your class next week. His records indicate that he has generally received A's in academic subjects. His standardized achievement scores place him above the 90th percentile.

1	2	3	4	5	6	7
NEVER OR ALMOST NEVER TRUE	USUALLY NOT TRUE	SOMETIMES BUT INFREQUENTLY TRUE	OCCASIONALLY TRUE	OFTEN TRUE	USUALLY TRUE	ALWAYS OR ALMOST ALWAYS TRUE

Self-reliant	
Yielding	
Helpful	
Defends own belief	
Cheerful	
Moody	
Independent	
Shy	
Conscientious	
Athletic	
Affectionate	
Theatrical	
Assertive	
Flatterable	
Happy	
Strong personality	
Loyal	
Unpredictable	
Forceful	
Feminine	

Reliable	
Analytical	
Sympathetic	
Jealous	
Has leadership abilities	
Sensitive to the needs of others	
Truthful	
Willing to take risks	
Understanding	
Secretive	
Makes decisions easily	
Compassionate	
Sincere	
Self-sufficient	
Eager to soothe hurt feelings	
Conceited	
Dominant	
Soft-spoken	
Likable	
Masculine	

Warm	
Solemn	
Willing to take a stand	
Tender	
Friendly	
Aggressive	
Gullible	
Inefficient	
Acts as a leader	
Childlike	
Adaptable	
Individualistic	
Does not use harsh language	
Unsystematic	
Competitive	
Loves children	
Tactful	
Ambitious	
Gentle	
Conventional	

FORM 5

Joseph Miller will enroll in your class next week. His records indicate that he has generally received C's and D's in academic subjects. His standardized achievement scores generally fall below the 50th percentile.

1	2	3	4	5	6	7
NEVER OR ALMOST NEVER TRUE	USUALLY NOT TRUE	SOMETIMES BUT INFREQUENTLY TRUE	OCCASIONALLY TRUE	OFTEN TRUE	USUALLY TRUE	ALWAYS OR ALMOST ALWAYS TRUE

Self-reliant	
Yielding	
Helpful	
Defends own belief	
Cheerful	
Moody	
Independent	
Shy	
Conscientious	
Athletic	
Affectionate	
Theatrical	
Assertive	
Flatterable	
Happy	
Strong personality	
Loyal	
Unpredictable	
Forceful	
Feminine	

Reliable	
Analytical	
Sympathetic	
Jealous	
Has leadership abilities	
Sensitive to the needs of others	
Truthful	
Willing to take risks	
Understanding	
Secretive	
Makes decisions easily	
Compassionate	
Sincere	
Self-sufficient	
Eager to soothe hurt feelings	
Conceited	
Dominant	
Soft-spoken	
Likable	
Masculine	

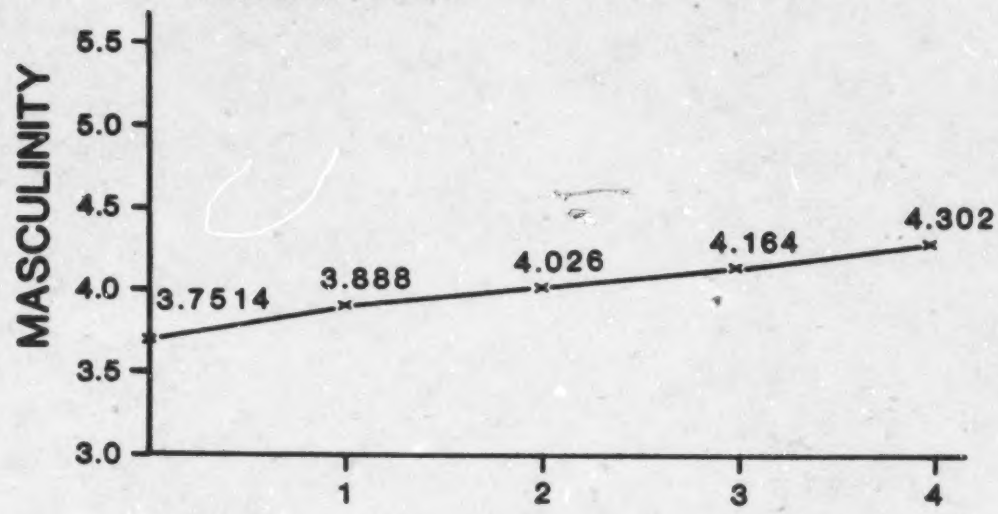
Warm	
Solemn	
Willing to take a stand	
Tender	
Friendly	
Aggressive	
Gullible	
Inefficient	
Acts as a leader	
Childlike	
Adaptable	
Individualistic	
Does not use harsh language	
Unsystematic	
Competitive	
Loves children	
Tactful	
Ambitious	
Gentle	
Conventional	

FORM 6

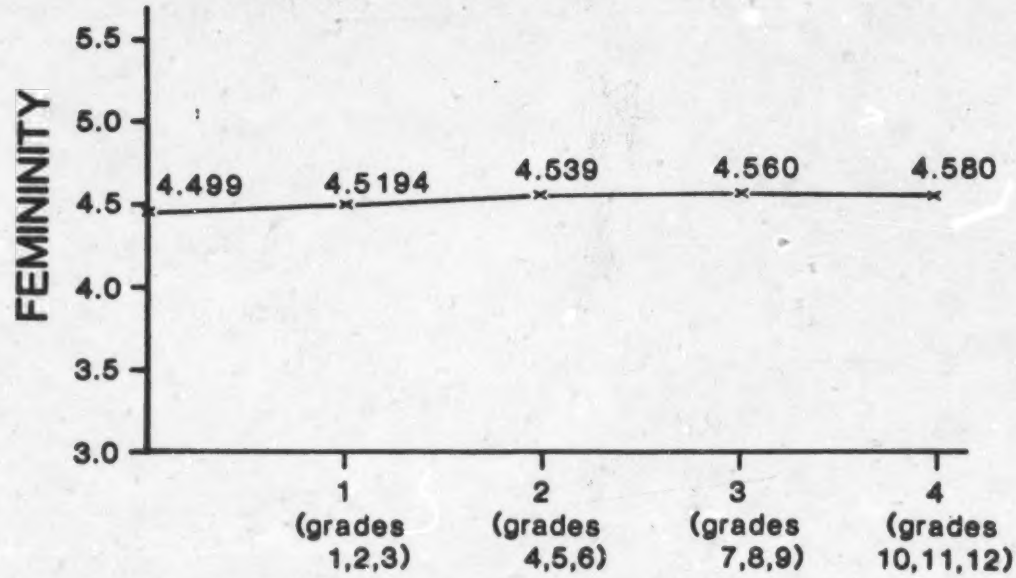
APPENDIX B

SLOPES

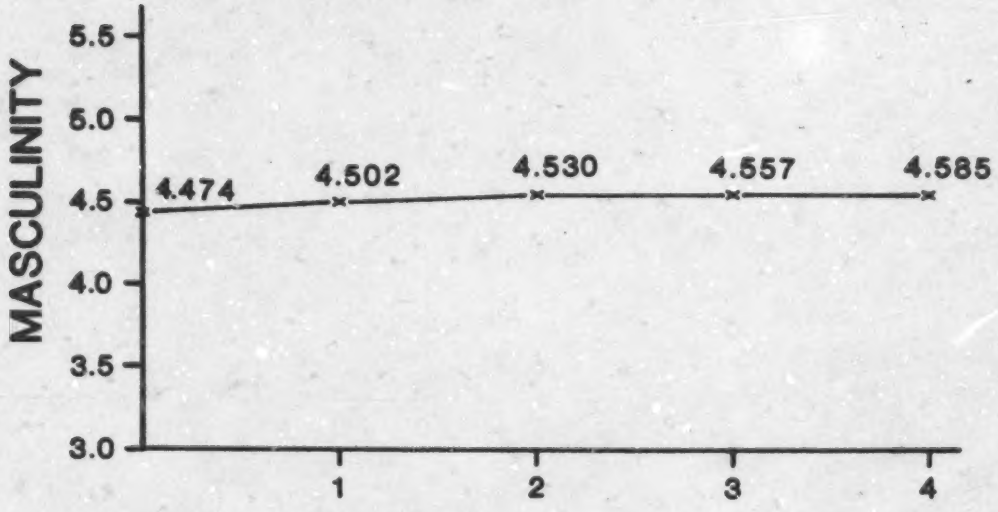
PREDICTED MASCULINITY RATING SCORES OVER GRADE LEVEL GROUP FOR STUDENT STIMULUS ONE: FEMALES, N=33



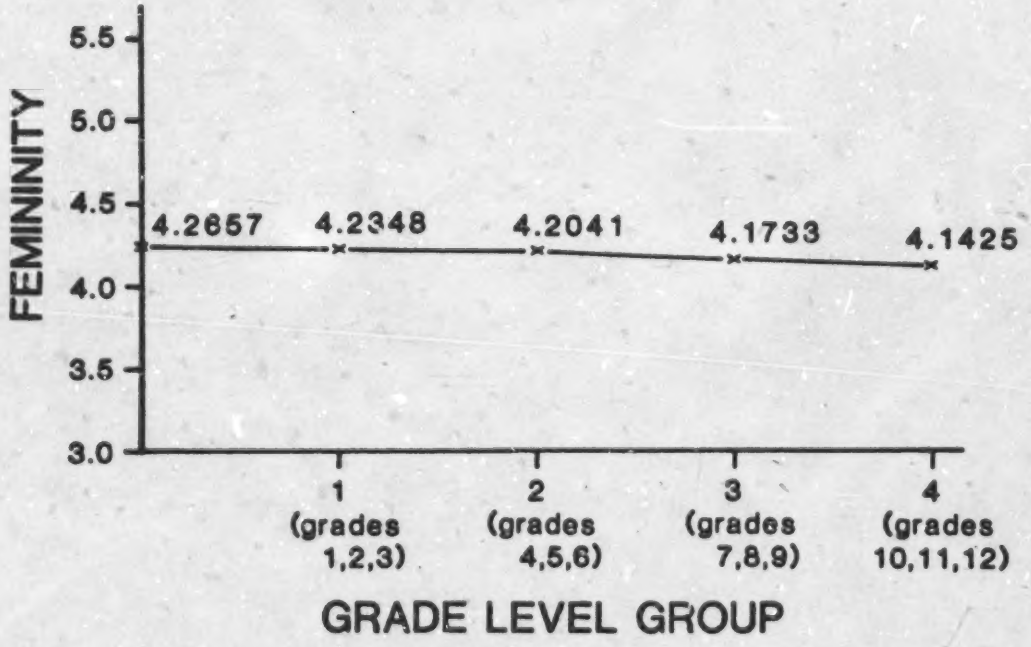
PREDICTED FEMININITY RATING SCORES OVER GRADE LEVEL GROUP FOR STUDENT STIMULUS ONE: FEMALES, N=33



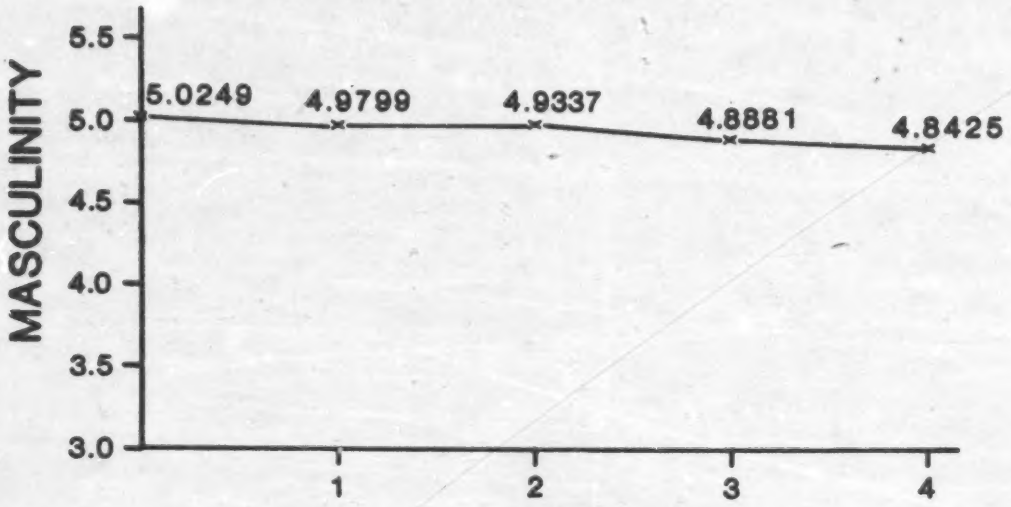
PREDICTED MASCULINITY RATING SCORES OVER GRADE LEVEL GROUP FOR STUDENT STIMULUS TWO: MALES, N=27



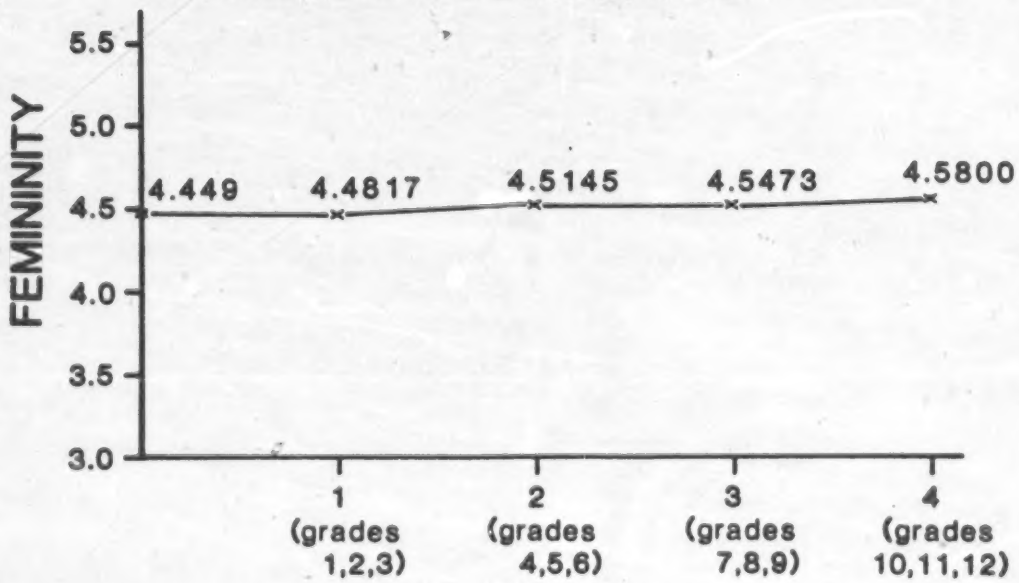
PREDICTED FEMININITY RATING SCORES OVER GRADE LEVEL GROUP FOR STUDENT STIMULUS TWO: MALES, N=27



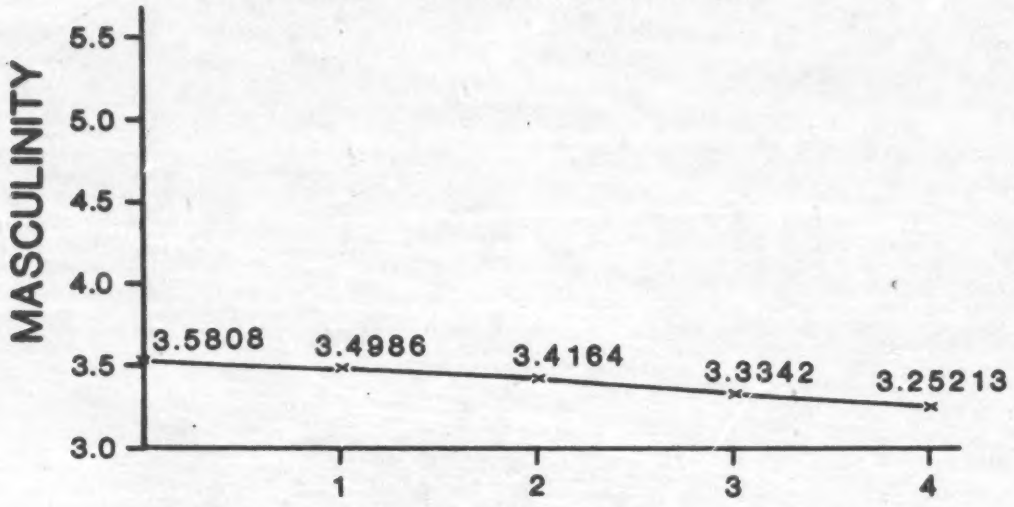
PREDICTED MASCULINITY RATING SCORES OVER GRADE LEVEL GROUP FOR STUDENT STIMULUS THREE: HIGH ACHIEVING FEMALES, N=39



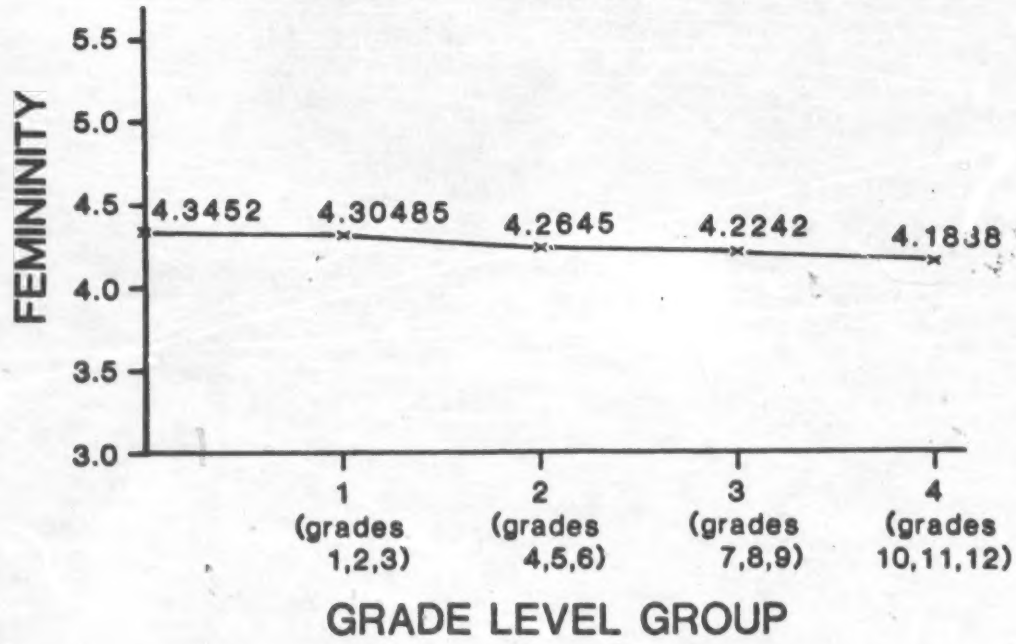
PREDICTED FEMININITY RATING SCORES OVER GRADE LEVEL GROUP FOR STUDENT STIMULUS THREE: HIGH ACHIEVING FEMALES, N=39



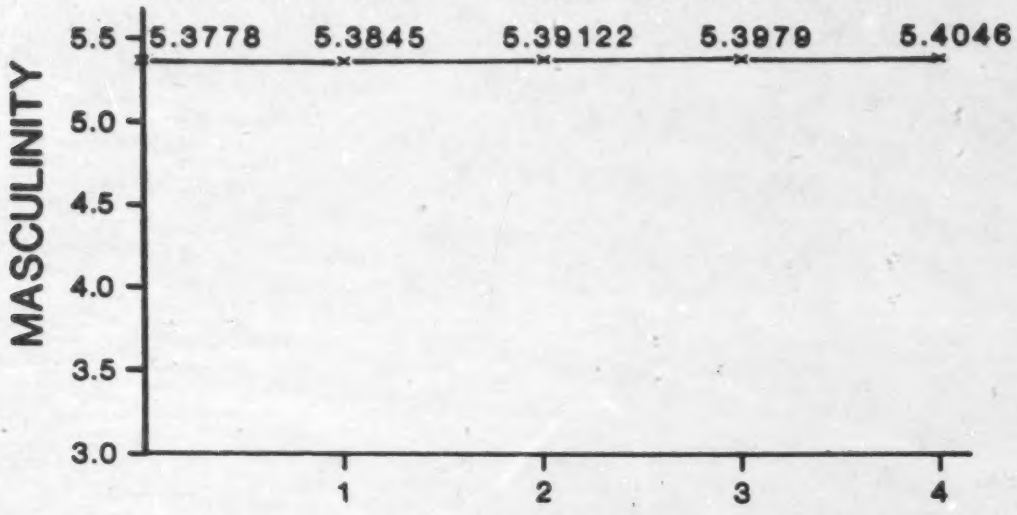
PREDICTED MASCULINITY RATING SCORES OVER GRADE LEVEL GROUP FOR STUDENT STIMULUS FOUR: LOW ACHIEVING FEMALES, N=28



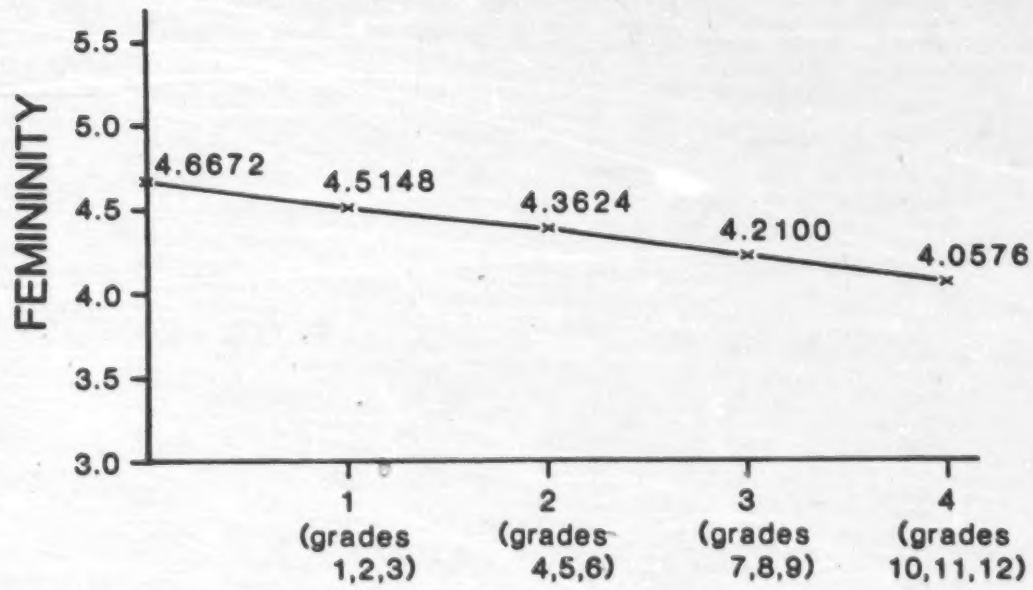
PREDICTED FEMININITY RATING SCORES OVER GRADE LEVEL GROUP FOR STUDENT STIMULUS FOUR: LOW ACHIEVING FEMALES, N=28



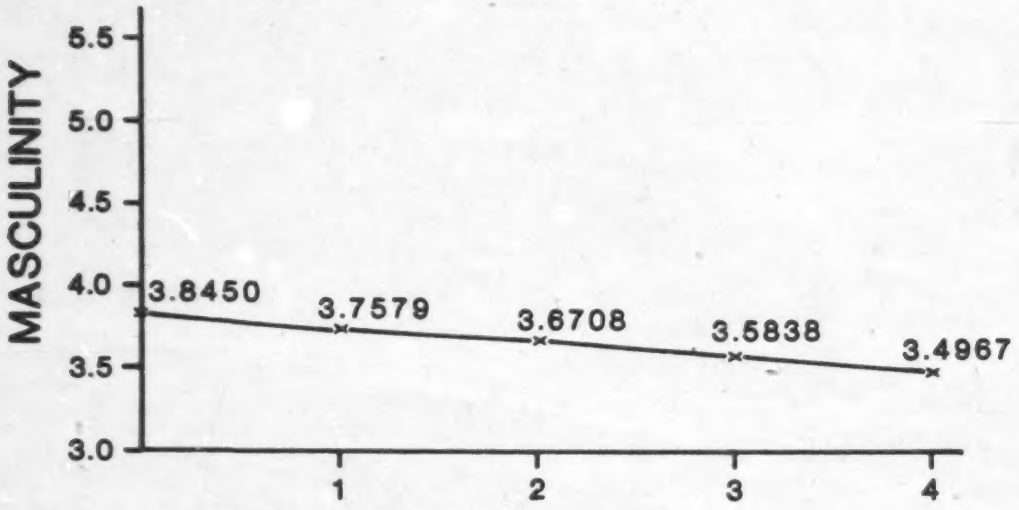
PREDICTED MASCULINITY RATING SCORES OVER GRADE LEVEL GROUP FOR STUDENT STIMULUS FIVE: HIGH ACHIEVING MALE STUDENTS, N=42



PREDICTED FEMININITY RATING SCORES OVER GRADE LEVEL GROUP FOR STUDENT STIMULUS FIVE: HIGH ACHIEVING MALES, N=42



PREDICTED MASCULINITY RATING SCORES OVER GRADE LEVEL GROUP FOR STUDENT STIMULUS SIX: LOW ACHIEVING MALES, N=31



PREDICTED FEMININITY RATING SCORES OVER GRADE LEVEL GROUP FOR STUDENT STIMULUS SIX: LOW ACHIEVING MALES, N=31